

**【DESCRIPTION】****【Invention Title】**

**GAS CONTROL/BLOCK VALVE AND AUTOMATIC CIRCULATION  
DEVICE OF WARM WATER USING THE GAS VALVE**

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**【Technical Field】**

The present invention relates to gas control valves and gas blocking valves and an automatic warm water circulator using the same, and more particularly, to gas control valves and gas blocking valves for automatically  
10 controlling and blocking gas in response to temperature changes using elastic force of springs and vapor pressure, and to an automatic warm water circulator for controlling supply of gas in response to the internal temperature changes of a boiler using the gas control valves and the gas blocking valves and for automatically producing and circulating warm water using valves opened and  
15 closed by inner vapor pressure of the boiler and only gas as a heat source without a circulation pump or other devices such that warm water is continuously supplied to heaters, such as floors, bedcovers, coverlets, blankets, car seats, underfloor heaters, or the like, and hot pads used in physical therapy, and particularly, can use portable gas as a heat source to conveniently produce and supply warm water to the heaters.

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**【Background Art】**

In the conventional manner of supplying heat to floors, hot pads, or the like, electricity is generally utilized, the conventional blankets, floors, or hot pads to be electrically heated are effective as one of various methods of providing local  
25 heating.

However, since the electrical heater uses an electric heating wire as its heat source, electromagnetic waves harmful to the human body are generated. Research has shown that the minimum intensity of electromagnetic waves harmful to the human body is between 2 mG and 4 mG. Considering this, the intensity of  
30 electromagnetic waves generated from the electric heater ranges from 50 mG to a value exceeding 1,000 mG.